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U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER: 16869P-006100US

US APPLICATION NO (If known, see 37 CFR 1 5): 09/508870

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/JP97/03281	September 17, 1997	September 17, 1997

TITLE OF INVENTION
SCHEDULE MANAGEMENT SYSTEM FOR TRAVEL EXPENSE ACCOUNT

APPLICANT(S) FOR DO/EO/US
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Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [x] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S C 371.
3. [x] This express request to begin national examination procedures (35 U.S C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. [x] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date
5. [x] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [ ] is transmitted herewith (required only if not transmitted by the International Bureau).
   b. [x] has been transmitted by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [x] A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. [x] Amendments to the claims of the International Application under PCT Article 19 (35 U.S C. 371(c)(3))
   a. [ ] are transmitted herewith (required only if not transmitted by the International Bureau).
   b. [ ] have been transmitted by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [x] have not been made and will not be made
8. [ ] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [ ] A FIRST preliminary amendment.
    [ ] A SECOND or SUBSEQUENT preliminary amendment.
14. [ ] A substitute specification.
15. [ ] A change of power of attorney and/or address letter.
16. [x] Other items or information:
    Courtesy copy of published PCT application

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U.S. APPLICATION NO (If known, see 37 CFR 1.5) 09/508870	INTERNATIONAL APPLICATION NO PCT/JP97/03281	ATTORNEY'S DOCKET NUMBER 16869P-006100US

	CALCULATIONS PTO USE ONLY	
17. [xx] The following fees are submitted:		
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO $970.00		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO $840.00		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO $760.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) $670.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) $96.00		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 840	
Surcharge of $130.00 for furnishing the oath or declaration later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	5 - 20 =		X $18.00	$	
Independent claims	2 - 3 =		X $78.00	$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ $260.00	$	
TOTAL OF ABOVE CALCULATIONS =				$ 840	
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also by filed (Note 37 CFR 1.9, 1.27, 1.28).				$	
SUBTOTAL =				$	
Processing fee of $130.00 for furnishing the English translation later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$	
TOTAL NATIONAL FEE =				$ 840	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property +				$	
TOTAL FEES ENCLOSED =				$ 840	
				Amount to be: refunded	$
				charged	$

a. [ ] A check in the amount of $_____ to cover the above fees is enclosed.

b. [x] Please charge my Deposit Account No. 20-1440 in the amount of $ 840 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [x] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 20-1430. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

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DESCRIPTION

SCHEDULE MANAGEMENT SYSTEM WHICH PERFORMS TRAVEL EXPENSE ADJUSTMENT PROCESSING

Technical Field

This invention relates to schedule management, and more particularly to a schedule management system which performs adjustment of travel expenses involved in an actual outwork in accordance with a schedule planned in advance.

Background Art

A schedule management system is known at present which allows schedules of persons to be inputted and allows such persons to confirm their schedules by themselves or informs another person of the schedules.

Meanwhile, if an employee of a company performs an outwork, adjustment of travel expenses involved in the outwork is performed in the form of outwork travel expense adjustment after the outwork has been performed. In the travel expense adjustment of the outwork, information of the outwork date, the destination, expenses and so forth is inputted to issue a travel expense slip, and the travel expenses and the outwork expenses are adjusted with the

travel expense slip.

It is an object of the present invention to provide a schedule management system and a schedule management method which performs a adjustment job of travel expenses for an outwork based on data inputted to the schedule management system.

Disclosure of Invention

In order to attain the object described above, according to the present invention, the following construction is employed.

In a schedule management system in which a plurality of terminal devices are interconnected over a line for performing travel expense adjustment processing, at least one of the plurality of terminals serves as a management terminal device which manages schedules of users managed in the system on an external storage apparatus; each of the plurality of terminal devices other than the management terminal device serves as a schedule inputting terminal having inputting means for inputting schedule information; the schedule management system comprises an external storage apparatus for storing schedule information inputted from the inputting means of the schedule inputting terminal and travel expense adjustment information representative of whether or not travel expense adjustment has been

performed; and the schedule management system further comprises non-adjusted travel expense information search means for comparing the travel expense adjustment information and the schedule information with each other to search for non-adjusted travel expense information.

Brief Description of Invention

FIG. 1 is a flow chart illustrating a flow of processing of an embodiment according to the present invention; FIG. 2 is a view illustrating a recording form of schedule information used in the embodiment of the present invention; FIG. 3 is a view illustrating numerals and places of a "classification" and a "status" in the schedule information of the embodiment of the present invention; FIG. 4 is a view showing a travel expense slip in the embodiment of the present invention; FIG. 5 is a view illustrating a record of information of a header part of the travel expense slip in the embodiment of the present invention; FIG. 6 is view illustrating a record of information of a particulars part of the travel expense slip in the embodiment of the present invention; FIG. 7 is a view illustrating a relationship between a combination of the "classification" and the "status" for a schedule information record and a judgment of whether or not a bill relates to an outwork; FIG. 8 is a view showing an example

of a display screen in the embodiment of the present invention; FIG. 9 is a view illustrating a form of mail when travel expense adjustment information is sent by mail in the embodiment of the present invention; and FIG. 10 is a view showing a record form of an attachment file when travel expense adjustment information is sent as an attachment file to a sheet of a work flow in the embodiment of the present invention.

Best Mode for Carrying out the Invention

In the following, the present invention is described with reference to the drawings.

FIG. 1 is a flow chart illustrating a flow of processing of an embodiment according to the present invention.

First, processing from inputting to storage of schedule information is described.

Schedule information inputting means 110 is used to input commands such as "updating", "preselection", "reference", "cancellation" and so forth which are information representative of in what manner a user of a schedule wants to treat the schedule. It is to be noted that in what manner a user of a schedule wants to treat the schedule specifically signifies, in regard to "updating", a case wherein the user by itself inputs a schedule of the

user itself, and in regard to "preselection", a case wherein the user inputs a schedule of another person. It further signifies, in regard to "reference", a case wherein the user merely sees schedules of the user itself and other persons which have been inputted till now. If a schedule is inputted by any other than the user itself with the "preselection" command, then the person of the schedule can make a reply of whether or not the person approves the schedule preselection. The reply is performed by picking up a pertaining one of choices "approved, not approved, pending" displayed as a pop-up menu when the schedule is displayed. Further, the preselection source can cancel a preselected schedule with the "cancellation" command.

For the "updating" and "preselection" commands among the commends given above, schedule information of an actual schedule is inputted to the schedule information inputting means 101. The schedule information is specifically a name number for identifying an object person of a schedule, a schedule date, a start time, an end time, a schedule business (conference, explanation meeting or the like), a place and so forth.

It is to be noted that the place is composed of two components of a location of an object person of a schedule and a classification. The location is a destination of an object person of the schedule. The classification is a

classification of the destination and is inputted by picking up a pertaining one of choices "captive building, client, different captive building, transfer, other" displayed as a pop-up menu upon inputting.

The schedule information inputting means is connected to a server apparatus, and schedule information editing means 102 in the server apparatus edits schedule information inputted by the schedule information inputting means to information of a record form for being stored onto an external storage apparatus connected to the server apparatus.

FIG. 2 is a view illustrating the record form of schedule information stored in the external storage apparatus. The record form of the schedule information includes information of a name number 201, a schedule date 202, a start time 203, an end time 204, a schedule business 205, a place (location 206, classification 207), and a status 208. Of the schedule information, the information of the name number 201, schedule date 202, start time 203, end time 204, schedule business 205 and place (location 206) which are information specifying a person is schedule information (the name number 201, schedule date 202, start time 203, end time 204, schedule business 205 and location 206) inputted to the schedule information inputting means and stored as it is, but the information of the

classification 207 is stored after a value corresponding to the location 206 is converted using such a table as shown in FIG. 3(a).

The status 208 is described below.

In the case of "preselection" by which a schedule is inputted by any other than the person itself from the schedule information inputting means 101, the person itself whose schedule has been inputted makes a reply of whether or not the person approves the schedule. The reply is made by picking up a pertaining one of choices "approved, not approved, pending" displayed as a pop-up menu when the schedule is displayed. It is to be noted that a person who has preselected a schedule of another person can cancel the inputted schedule.

The status 208 indicates such an inputted state of a schedule as described above and includes six types of "registered, preselected, approved, not approved, pending, cancelled". The "registered" indicates a case where "updating" is inputted from the schedule information inputting means 101 and signifies that the schedule has been inputted by the person itself. The "preselected" indicates a case wherein "preselection" is inputted from the schedule information inputting means 101 and signifies that the schedule has been inputted by another person and that the destination party of the preselection has not made

a reply to the schedule. The "approved" signifies that the destination party of the preselection has approved, the "non-approved" signifies that the destination party of the preselection has not approved the "pending" signifies that the destination party of the preselection has pended its reply, and the "cancelled" signifies that the destination party of the preselection has cancelled its approval of the schedule.

The schedule information inputted from the schedule information inputting means 101 is edited to information of the record form for storing the information onto the external storage apparatus by the schedule information editing means 102.

FIG. 2 illustrates an example of schedule information records. A record for one schedule information includes a name number 201, a schedule date 202, a start time 203, an end time 204, a schedule business 205, a place (location 206, classification 207) and a status 208.

Schedule information storage means 103 writes a record edited by the schedule information editing means 102 into an external storage apparatus 104. In the external storage apparatus, records of schedule information are sorted with the name number and the schedule date.

Now, a travel expense slip and travel expense adjustment information 106 are described.

The travel expense slip is a slip prepared, when a person works at a place other than an ordinary working place by an outwork, in order for the outwork person to have travel expenses to an outwork destination and outwork expenses adjusted.

(a) and (b) of FIG. 4 show examples of a travel expense slip prepared by an employee whose name number of the schedule information shown in FIG. 2 is "001106866".

The travel expense slip 401 is composed of a slip header part 402 and a slip particulars part 403. The slip header part 402 is filled with information necessary to specify a preparing person of the slip such as the name, the name number or the name of the section of the outwork person, the submitted date of the slip, a signature indicating that the slip is approved by a pertaining superior, a signature of the person itself indicating that the slip is prepared by the person itself, a slip number which is information of a slip number applied for identification of the individual slip and so forth.

The slip particulars part 403 is filled with the outwork date, a day of the week, a start point, a return point, a start time, a return time, the name of the outwork destination, the name of the city, ward, town or village of the outwork destination, a business, a traffic route, a daily allowance, travel expenses of details such as a fare

for a train or a bus, and so forth.

For one record of the slip particulars of the slip particulars part 403, information for one day is used as one record (one case). Description is given taking a record of the second slip particulars of (a) of FIG. 4 as an example. The record of the second slip particulars of (a) shown in FIG. 4 is for adjustment of an outwork for January 16th. However, according to the schedule information file of FIG. 2, two records 212, 213 must be present as records for January 16th from the schedule date 202. Further, it is determined whether or not the two records are for an outwork. While a detailed determination method is hereinafter described with reference to FIG. 7, it is determined in advance, for example, based on table information shown in FIG. 3 what combination of values indicate an outwork and what combination of values indicates no outwork. In the example of FIG. 3(a), for example, it is determined that the "captive building" which exhibits the value "0" does not signify an outwork, but the "client" or the "different captive building" which exhibits the value "1" or "2" signifies an outwork, and a judgment is made based on the determination. Consequently, with regards to the two records 212 and 213, since the values of the division classification 207 exhibit "1" and "2", respectively, it is judged that both of the records 212 and

213 are for an outwork. In this manner, in the particulars of the travel expense slip, an outwork for one day is recorded collectively as particulars for January 16th. For the outwork destination name and the address name as well as the business, contents of one of outworks are recorded as a representative. Although, in the example of (a) of FIG. 4, the outwork to the "F bank" of the record 213 where the start time of the outwork is the earliest is recorded gently, naturally the outwork which exhibits the last start time may be recorded instead.

As a general flow of processing of a travel expense slip, after a travel expense slip is prepared, the thus prepared travel expense slip is sent through a superior to the slip preparing person to an accounting department, in which the recorded contents of the travel expense slip are checked and, if there is no omission, no error or the like with regard to items to be recorded, the travel expense slip is approved. The information of the approved travel expense slip is stored onto the external storage apparatus 106. The information of the travel expense slip is stored separately in the slip header part and the slip particulars part.

FIG. 5 illustrates an example of records of slip headers stored separately. A record of the slip header includes a slip number, a submission date, a name number

and so forth. The slip number is a number applied by the accounting department when the travel expense slip is received, and is used for identification of the individual slip. It is to be noted that, in the example of FIG. 5, slip numbers are sorted and stored in an ascending order.

(a) and (b) of FIG. 4 show actual travel expense slips prepared already. The travel expense slip of (a) of FIG. 4 corresponds to a record 501 shown in FIG. 5, and the travel expense slip of (b) of FIG. 4 corresponds to another record 502 shown in FIG. 5.

(a) and (b) of FIG. 6 show an example of travel expense slip particulars records corresponding to the travel expense slip particulars parts of the travel expense slips shown in (a) and (b) of FIG. 4, respectively.

The travel expense slip particulars record includes an outwork date, a start time, a return time, an outwork destination name and the name of a city, ward, town or village of the destination, a traffic route, a daily allowance, travel expenses for different items and so forth. It is to be noted that travel expense slip particulars records are sorted in a unit of the same slip number.

Processing contents of non-adjusted travel expense search means 105 which performs a search of non-adjusted travel expenses are described.

The non-adjusted travel expense search means 105

collates, when a command inputted from the schedule information inputting means 101 is "reference" to schedule information, based on a name number inputted from the schedule information inputting means 101, schedule information records stored on the external storage apparatus with the travel expense slip header records and the travel expense slip particulars records and extracts, from among schedule information records for outworks and those schedule information records which are judged to be for outworks, those records which do not include a travel expense slip particulars record whose schedule date and outwork date coincide with each other.

A processing procedure performed by the non-adjusted travel expense search means 105 is described more particularly with reference to FIGS. 2 to 6.

The present embodiment is an example wherein non-adjusted travel expenses of an employee whose name number is "001106866" are extracted. The schedule information of the employee is such as illustrated in FIG. 2, and it is assumed that the travel expense slips prepared by the employee are such as illustrated in (a) and (b) of FIG. 4 and the travel expense adjustment information is such as illustrated in (a) and (b) of FIGS. 5 and 6.

First, from the travel expense adjustment information of FIGS. 5 and 6, a travel expense adjustment

situation of the employee who is an object of the search for non-adjusted travel expenses is checked.

In order to extract adjusted travel expense slips of the employee of the search object, the travel expense slip header record of FIG. 5 is search for using the name number "001106866" of the employee of the retrieval object as a key. If the search is performed from among the travel expense slip header records of FIG. 5 using the name number "001106866" as a search key, then the two records of "record 501" and "record 502" are hit. Then, in order to extract particulars of the thus hit travel expense slips, a search for a travel expense slip particulars record is performed using the slip numbers (slip No.) of the thus hit travel expense slip header records as a key, that is, using the slip numbers "97010009" and "97010013" of the travel expense slip particulars records "record 501" and "record 502" as a key, and five records 601 to 605 are extracted as coincident records. Adjusted expenses of the employee of the search object can be extracted in this manner.

Meanwhile, from the schedule information file, an outwork situation of the employee of the name number "001106866" is checked. First, schedule information records are searched using the name number "001106866" and the system date as keys to extract those schedule information records wherein the name number is coincident

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and the schedule date is a date in the past with respect to the system date. In the present example, if the system date is "January 25, 1997", then fourteen records 209 to 222 are extracted. Then, in order to extract records of outwork schedules from among the extracted schedule information records, a search of the schedule information records 209 to 222 is performed using values of the classification and the status as keys.

The judgment of whether or not a schedule is for an outwork is performed based on a combination of the values of the classification 207 and the status 208. Criteria are illustrated in FIG. 7. The criteria are an abstract of relationships between combinations of values which can be assumed by the classification and the status and how to judge whether or not a schedule is for an outwork for the individual cases.

Referring to FIG. 7, the "outwork" signifies that the schedule is judged as an outwork schedule. Those records which are for a schedule registered by the person itself and whose classification is the client, the different captive building, the non-captive building or the transfer and those records which are for a schedule with regard to which a reply of approval to preselection is obtained and whose division is the client, the different captive building, the non-captive building and the transfer

are judged as records for an "outwork".

The "other than outwork" signifies that the record is judged not to be for an outwork schedule. This judgement is made irrespective of the classification and made for those records whose classification is the captive building or some other.

The "obscure" signifies that it cannot be judged whether or not the record is for an outwork. This judgment is made for those records wherein, although the classification exhibits one of the client, the different captive building, the non-captive building and the transfer from which the record can be judged to be for an outwork, no reply is obtained to a preselection or a schedule is not established because a reply is pended.

The "out of object" signifies that there is no need of judgement of whether or not the record is for an outwork and the record is outside the range of an object of search. This judgment is made for those records of schedules which have not been approved to preselections or cancelled by the preselection sources.

Based on the criteria for whether or not a record is for an outwork illustrated in FIG. 7, the nine records 211, 212, 213, 214, 216, 217, 218, 219 and 220 are judged to be schedule information records for an outwork, the one record 210 is judged to be a schedule information record for any

other than an outwork, the one record 215 is judged to be obscure, and the three records 209, 221 and 222 are judged to be schedule information records which are out of object.

Those records which are judged to be for an outwork and judged to be obscure are determined as an object of a non-adjusted travel expense search. The reason why those records which are judged to be obscure are included in the object of the search is that they are records which may possibly be for an outwork. The present system leaves room for judgment by a human being using succeeding means with regard to those schedules which cannot be judged by the system.

Here, collation between the travel expense slip particulars records 601 to 605 narrowed down as records of a search object and the schedule information records 211 to 222 is performed. In the collation, matching is performed using the outwork date of the travel expense slip particulars record and the schedule date of the schedule information record as keys.

As a result of the collation, the travel expense slip particulars records 601 to 605 and the schedule information records 212, 213 and 214, 216 and 217, 218, and 219 and 220 coincide with each other, respectively. The schedule information records 211 and 215 do not exhibit coincidence between the schedule date with the outwork date

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with any of the travel expense slip records, and are finally extracted by the non-adjusted travel expense search means 105. If some record or records are extracted by the non-adjusted travel expense search means 105, then schedule message display/reply means 107 displays the schedule information and a message regarding the record or records extracted by the non-adjusted travel expense search means 105 on a schedule message display reply screen. If no record is extracted by the non-adjusted travel expense search means 105, then the schedule message display/reply means 107 displays only the schedule information on a schedule display screen.

FIG. 8 shows an example of the display reply screen by the schedule message display/reply means. The display reply screen includes a schedule display section 801 for displaying a schedule and a message display section 802 for outputting a message based on the schedule information record or records extracted by the non-adjusted travel expense search means 105.

The schedule display section 801 displays an arbitrary form of schedule information.

The message display section 802 displays, based on a record extracted by the non-adjusted travel expense search means 105, the messages "The travel expenses for the outwork dated __ (month), __ (day) have not been adjusted."

and "Should the travel expenses be adjusted? and has set therein an input column 811 which is used to input a reply regarding whether or not adjustment of the travel expenses should be performed. If adjustment of the travel expenses should be performed, then "y" will be inputted to the input column 811, but if such adjustment should not be performed, "n" will be inputted to the input column 811 from a keyboard. If "y" is inputted to the input column, then changeover to travel expense adjustment information inputting means 108 is performed, but if "n" is inputted, then the present schedule system ends its operation.

If a key any other than "y" or "n" is inputted, then the message "The inputted key is invalid: please input "y" or "n"" is displayed.

In FIG. 8, messages 803 and 804 which correspond to the schedules of the records 211 and 215 extracted by the non-adjusted travel expense adjustment means 105 are displayed. The message 803 corresponds to the record 211 and is displayed because the system judges that the travel expenses are not adjusted with regard to the record 211. The message 804 corresponds to the record 215 and is displayed in order to leave the judgment for necessity of adjustment of the travel expenses to the user.

At underlined portions of the messages, edited schedule dates and locations of the records extracted by

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the non-adjusted travel expense search means 105 are displayed. In FIG. 8, at the portions 805 to 806 and 808 to 809, values obtained by editing the months and the days based on the schedule dates of the schedule information records 211 and 215 are displayed, and at the locations 807 and 810, acquired locations of the schedule information records 211 and 215 are displayed.

Finally, processing from preparation to issuance of a travel expense slip is described.

The travel expense adjustment information inputting means 108 inputs information necessary for adjustment of travel expenses. The information necessary for adjustment of travel expenses is the same as the information recorded on a travel expense slip, and includes the submitted date of the slip, the name of the section of the outwork person, the name number, the name, the outwork date, a day of the week, a start point, a return point, a start time, a return time, the name of the outwork destination, the name of the city, ward, town or village of the outwork destination, a business, a traffic route, a daily allowance, travel expenses of details such as a fare for a train or a bus, and so forth.

Based on the information of the name number, the outward destination and so forth of the travel expense adjustment information inputted from the travel expense

adjustment information inputting means 108, travel expense adjustment information search means 109 extracts, from among the travel expense slip header records and the travel expense slip particulars records stored on the external storage apparatus, those travel expense slip particulars records which have values equal to the information inputted from the travel expense adjustment information inputting means 109 such as the name number and the outwork destination, and displays the extracted travel expense particulars records on an input screen for travel expense adjustment information.

If a record whose contents are nearest to the travel expense adjustment information to be adjusted such that the outwork destination is the same is selected from among the displayed records, then information of the outwork date, the start time, the traffic route and so forth of the selected record is set to an input column of the input screen. Then, only that information which is different from that of the outwork with regard to which adjustment is to be performed such as the outwork date is re-inputted. Consequently, there is no need of manually inputting all adjustment information.

Travel expense slip editing means 110 edits the information inputted from the travel expense adjustment information inputting means 108 so that it has a form for

transmission using a work flow system. The work flow system is software for supporting automation of a circulation process in an office work which is composed of circulation of documents called accounting department traveling expanse slips from different sections. The travel expense slip editing means 110 edits the information inputted from the travel expense adjustment information inputting means 108 into information of a record form of a travel expense slip file to be circulated in the work flow system.

The record file edited by the travel expense slip editing means 110 is transmitted to a travel expense slip in-charge section, personnel or the like set in advance by the work flow system.

It is to be noted that, while, in the embodiment described above, travel expense adjustment information inputted from the travel expense adjustment information inputting means 108 is transmitted by a work flow, the transmission is not limited this, and travel expense adjustment information may be sent by mail. In this instance, the travel expense slip editing means 110 edits the travel expense adjustment information to information of a form of mail as seen in FIG. 10. The travel expense slip editing means 110 edits information inputted from the travel expense adjustment information inputting means 108

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into a body 1002 of mail and edits the travel expense slip in-charge section, personnel or the like as a unique transmission destination of the system on mail header 1001. Travel expense slip transmission means 111 transmits the mail to the destination set on the mail header based on the information edited by the travel expense slip editing means 110.

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Industrial Applicability

According to the present invention, in order to extract travel expenses which have not been adjusted, non-adjusted travel expense search means for collating information of a schedule inputted by a schedule management function and adjustment information of travel expenses inputted by a traveling adjustment function with each other is provided. Consequently, the following effects are achieved.

(1) An omission of travel expense adjustment when an outwork is performed can be extracted.

(2) Further, by displaying the extracted information on a schedule display screen, a user can be informed the non-adjustment information of the travel expenses. Accordingly, the user can be informed the non-adjusted information of the travel expenses.

(3) A miss and a delay of travel expense adjustment

processing of a user can be prevented, and in an accounting section, travel expense adjustment processing which is likely to be concentrated on a term-end can be performed as occasion calls and the working burden can be dispersed.

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CLAIMS

1. A schedule management system comprising a plurality of terminal devices interconnected over a line for performing travel expense adjustment processing, wherein

at least one of said plurality of terminals serves as a management terminal device which manages schedules of users managed in said system on an external storage apparatus;

each of said plurality of terminal devices other than said management terminal device serves as a schedule inputting terminal having an inputting means for inputting schedule information;

said schedule management system comprises an external storage apparatus for storing schedule information inputted from said inputting means of said schedule inputting terminal and travel expense adjustment information representative of whether or not travel expense adjustment has been performed; and

said schedule management system further comprises a non-adjusted travel expense information search means for comparing said travel expense adjustment information and the schedule information with each other to search for non-adjusted travel expense information.

Docket: 5-6805

2. A schedule information management system according to claim 1, wherein said travel expense adjustment information at least includes person identification information for specifying a person and information representative of an outwork date, and

said schedule information at least includes person identification information for identifying a person and information representative of a planned outwork date.

3. A schedule information management system according to claim 2, wherein said non-adjusted travel expense adjustment search means searches for a person to whom the person identification information of said travel expense adjustment information and the person identification information of said schedule information coincide with each other and further searches for said schedule information wherein the scheduled outwork date has passed prior to the date at present and the travel expense adjustment information represents that adjustment of the travel expenses has not been completed as the non-adjusted travel expense information.

4. A schedule management system comprising a plurality of user terminals connected to a LAN, characterized in that said user terminals comprises, in a particular terminal for managing schedules of users who use said terminals in said LAN,

JP04268459

an inputting means for inputting schedule information, a schedule information editing means for editing the schedule information obtained from said inputting means to information in a form for management on an external storage apparatus, a schedule information storage means for storing the edited schedule information onto said external storage apparatus,

a non-adjusted travel expense information search means for collating, for reference of schedule information, the travel expense adjustment information stored on said external storage apparatus and the schedule information stored on said external storage apparatus with each other to search for non-adjusted travel expenses, a schedule and message display/reply means for displaying the schedule information and the non-adjusted information on a screen of the terminal,

a travel expense adjustment information inputting means for inputting travel expense adjustment information when non-adjusted travel expenses are detected, a travel expense adjustment information editing means for editing the travel expense adjustment information obtained from said adjustment information inputting means to information in a record form or a file for transmission, and means for transmitting the record or file edited by said travel expense adjustment information editing means to a person or

EP 0 567 059 A2

section in charge of processing thereof.

5. A schedule management system according to claim 4, characterized in that said travel expense adjustment information search means searches for the travel expense adjustment information stored on said external storage means based on a name number or information of a destination and so forth in addition to the name number, and thereby said travel expense adjustment information inputting means can input travel expense adjustment information based on the travel expense adjustment information in the past.

EP 0 694 865 A2

ABSTRACT

The object of the present invention is to provide a schedule management system which utilizes a computer capable of performing extraction and adjustment of non-adjusted travel expenses in cooperation with a travel expense adjustment function.

In order to attain the object, schedule information records in which schedule information is retained and travel expense adjustment information records in which adjustment histories of travel expenses are retained are collated with each other. Outwork schedules are judged and extracted based on combined states of locations of the schedule information records and registration states of schedules. The schedule dates of the extracted schedule information records and outwork dates of the travel expense adjustment information records are compared with each other, and those schedule information records which do not exhibit coincidence are judged as records of non-adjusted travel expenses and extracted. With regard to the extracted records, a message that the travel expenses have not been adjusted is displayed, and an inquiry of whether or not the travel expenses should be adjusted is made. If a reply is entered, then a travel expense adjustment function is switchably rendered operative so that adjustment of the

JP-A-5-35806

travel expenses can be performed.

DOCUMENT 2

In the drawings:

FIG. 1

101 … Schedule information inputting means

Below 101 … Reference

102 … Schedule information editing means

Above 102 … Updating

103 … Schedule information storage means

104 … Schedule information

105 … Non-adjusted travel expense information search means

106 … Travel expense adjustment information

107 … Schedule and message display/reply means

Below 107, left … Not to be adjusted

Below 107, right … To be adjusted

108 … Travel expense adjustment information inputting means

109 … Travel expense adjustment information search means

110 … Travel expense slip editing means

111 … Travel expense slip transmission means

FIG. 2, from left, from above

Name number

Schedule date

0050-0050-2

Start time

End time

Schedule business

Arrangement

New year meeting

Demonstration

Arrangement

Client explanation meeting

Arrangement

Test

Transfer

In-company training

In-company training

In-company training

Transfer

Meeting in section

Institute

Place

Location

Classification

First meeting room

Ginza wine bar

T university

System laboratory

F bank

0050-0050-0050

Research and development department

N life insurance

Tokyo → Osaka

Kansai branch

Kansai branch

Kansai branch

Osaka → Tokyo

Second meeting room

○× building

Status

FIG. 3, from left, from above

Place

Captive building

Client

Different captive building

Non-captive building

Transfer

Other

Value

Status

Registered

Preselected

Approved

Not approved

0050369

Pending

Cancelled

Value

FIG. 4, from above, from left

Submitted date

January 16, 1997

Signature of superior

Section

First section, development department

Name, name No.

Taro Hitachi

Signature of the person

Slip No.

Month, day (day of the week)

Place

Hour, minute

Name of outwork destination, name of city, ward, town or village

Business

Traffic route

Daily allowance

Carfare

Taxi fare

Total amount (Yen)

0054-0054-0054

Departed from Gyotoku, arrived at Toyocho

Systems laboratory, Yokohama City

Arrangement

Gyotoku - Kudanshita - Azamino - Kudanshita - Toyocho

Departed from Gyotoku, arrived at Toyocho

F bank, Chuo Ward

Client explanation meeting

Gyotoku - Ginza - Tokyo - Otemachi - Toyocho

Total amount

Remarks

Accounting section

Section head

Chief

Person in charge

Submitted date

January 23, 1997

Signature of superior

Section

First section, development department

Name, name No.

Taro Hitachi

Signature of the person

Slip No.

JP-A-9-305396

Month, day (day of the week)

Place

Hour, minute

Name of outwork destination, name of city, ward, town or village

Business

Traffic route

Daily allowance

Carfare

Taxi fare

Total amount (Yen)

Departed from Chiba, Arrived at Osaka city

Kansai branch, Osaka city

In-company training

Chiba - Tokyo - Shin-Osaka - Umeda - Nanba

Departed from Osaka city, arrived at Osaka city

Kansai branch, Osaka city

In-company training

Nanba - Umeda - Nanba

Departed from Osaka city, arrived at Chiba

Kansai branch, Osaka city

In-company training

Nanba - Umeda - Shin-Osaka - Tokyo - Chiba

Total amount

Remarks

Patent-2005-5-5

Accounting section

Section head

Chief

Person in charge

FIG. 5, from left

Slip No.

Submitted date

Name number

FIG. 6, from above, from left

Slip No.

Outwork date

Departure time

Arrival time

Place

Outwork destination

Name of city, ward, town or village

Path

Daily allowance

Carfare

System laboratory

Yokohama city

Gyotoku - Kudanshita - …

F bank

0095-0959

Chiyoda-ward

Gyotoku - Ginza - …

Slip No.

Outwork date

Departure time

Arrival time

Place

Outwork destination

Name of city, ward, town or village

Path

Daily allowance

Carfare

Kansai branch

Osaka city

Chiba - Tokyo - Shin-Osaka - …

Kansai branch

Osaka city

Nanba - Umeda - Nanba

Kansai branch

Osaka city

Nanba - Umeda - Shin-Osaka …

FIG. 7, from above, from left

Status

Exhibit 5,565,694

Classification
Registered
Preselected
Approved
Not approved
Pending
Cancelled
Captive building
Other than outwork
Other than outwork
Other than outwork
Out of object
Other than outwork
Out of object
Client
Outwork
Obscure
Outwork
Out of object
Obscure
Out of object
Different captive building
Outwork
Obscure
Outwork

D5050-4-1-0

Out of object

Obscure

Out of object

Non-captive building

Outwork

Obscure

Outwork

Out of object

Obscure

Out of object

Transfer

Outwork

Obscure

Outwork

Out of object

Obscure

Out of object

Other

Other than outwork

Other than outwork

Other than outwork

Out of object

Other than outwork

Out of object

D4D5B8V

FIG. 8, from above

Schedule display section 801

[Message]

Travel expenses of the outwork to the T university on January (month) 13th (day) are not adjusted.

Travel expenses of the outwork to the N Life Insurance on January (month) 17th (day) are not adjusted.

Should the travel expenses be adjusted?

y: Yes

n: No

Cursor

FIG. 9, from above, from left

Travel expense slip header part

Travel expense slip particulars part

Submitted date of slip

Name number

Name

Particulars 1

Particulars n

Outwork date

Departure time

Outwork date

Departure time

EP 0 695 985 A1

FIG. 10, from above, from left

Header

Body

Destination

Addresser

Travel expense slip header part

Travel expense slip particulars part

Submitted date of slip

Name number

Name

Particulars 1

Particulars n

Outwork date

Departure time

Outwork date

Departure time

EP 0 395 040 A2

FIG.1

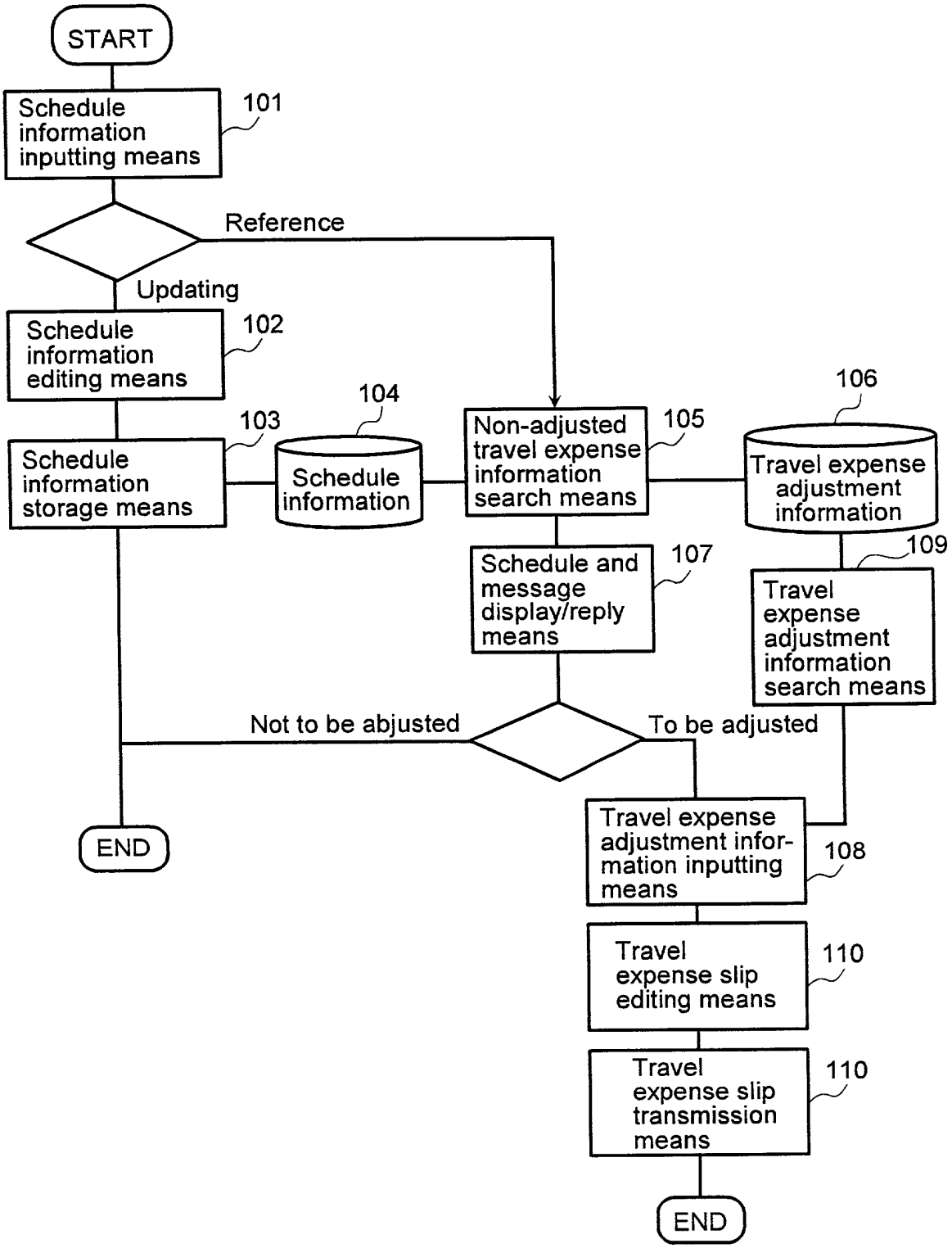
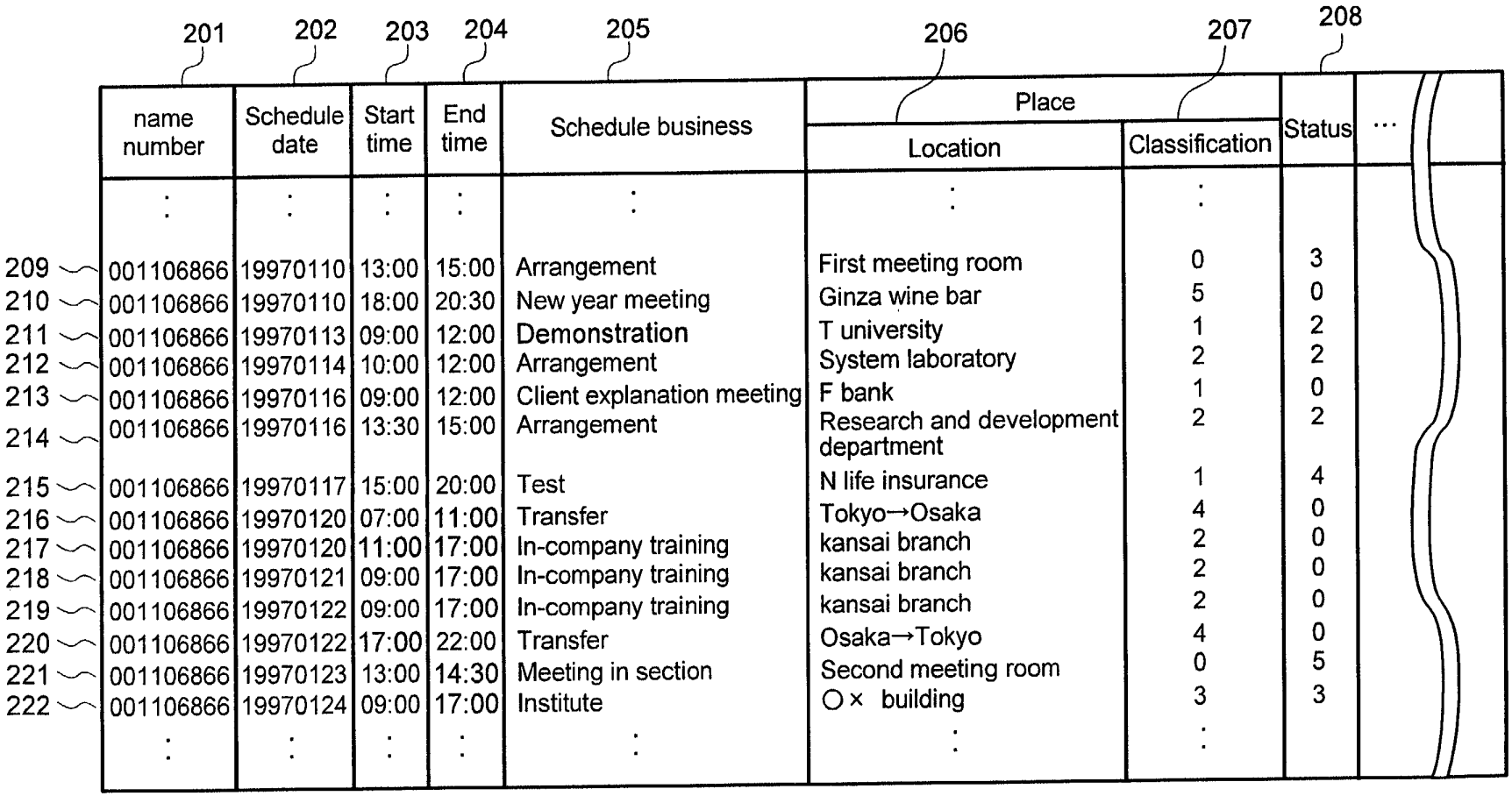

START
Schedule information inputting means
101
Reference
Updating
Schedule information editing means
102
Schedule information storage means
103
Schedule information
104
Non-adjusted travel expense information search means
105
Travel expense adjustment information
106
Schedule and message display/reply means
107
Travel expense adjustment information search means
109
Not to be abjusted
To be adjusted
END
Travel expense adjustment information inputting means
108
Travel expense slip editing means
110
Travel expense slip transmission means
110
END

FIG.2



	201 name number	202 Schedule date	203 Start time	204 End time	205 Schedule business	206 Place: Location	207 Place: Classification	208 Status	...
	⋮	⋮	⋮	⋮	⋮	⋮	⋮		
209	001106866	19970110	13:00	15:00	Arrangement	First meeting room	0	3	
210	001106866	19970110	18:00	20:30	New year meeting	Ginza wine bar	5	0	
211	001106866	19970113	09:00	12:00	Demonstration	T university	1	2	
212	001106866	19970114	10:00	12:00	Arrangement	System laboratory	2	2	
213	001106866	19970116	09:00	12:00	Client explanation meeting	F bank	1	0	
214	001106866	19970116	13:30	15:00	Arrangement	Research and development department	2	2	
215	001106866	19970117	15:00	20:00	Test	N life insurance	1	4	
216	001106866	19970120	07:00	11:00	Transfer	Tokyo→Osaka	4	0	
217	001106866	19970120	11:00	17:00	In-company training	kansai branch	2	0	
218	001106866	19970121	09:00	17:00	In-company training	kansai branch	2	0	
219	001106866	19970122	09:00	17:00	In-company training	kansai branch	2	0	
220	001106866	19970122	17:00	22:00	Transfer	Osaka→Tokyo	4	0	
221	001106866	19970123	13:00	14:30	Meeting in section	Second meeting room	0	5	
222	001106866	19970124	09:00	17:00	Institute	○× building	3	3	
	⋮	⋮	⋮	⋮	⋮	⋮	⋮		

FIG.3

(a)

Place	Value
Captive building	0
Client	1
Different captive building	2
Not-captive building	3
Transfer	4
Other	5

(b)

Status	Value
Registered	0
Preselected	1
Approved	2
Not Approved	3
Pending	4
Cancelled	5

EFS Web 2.1.15

00+00T" 0780568

FIG.4

(a)

401

402

403

Sub-mitted date	January 16 , 1997	Signa-ture of superi-or		Sec-tion	First section, development department	Name , name No.	Taro Hitachi 001106866	Signa-ture of the person			Slip No.	9701-0009

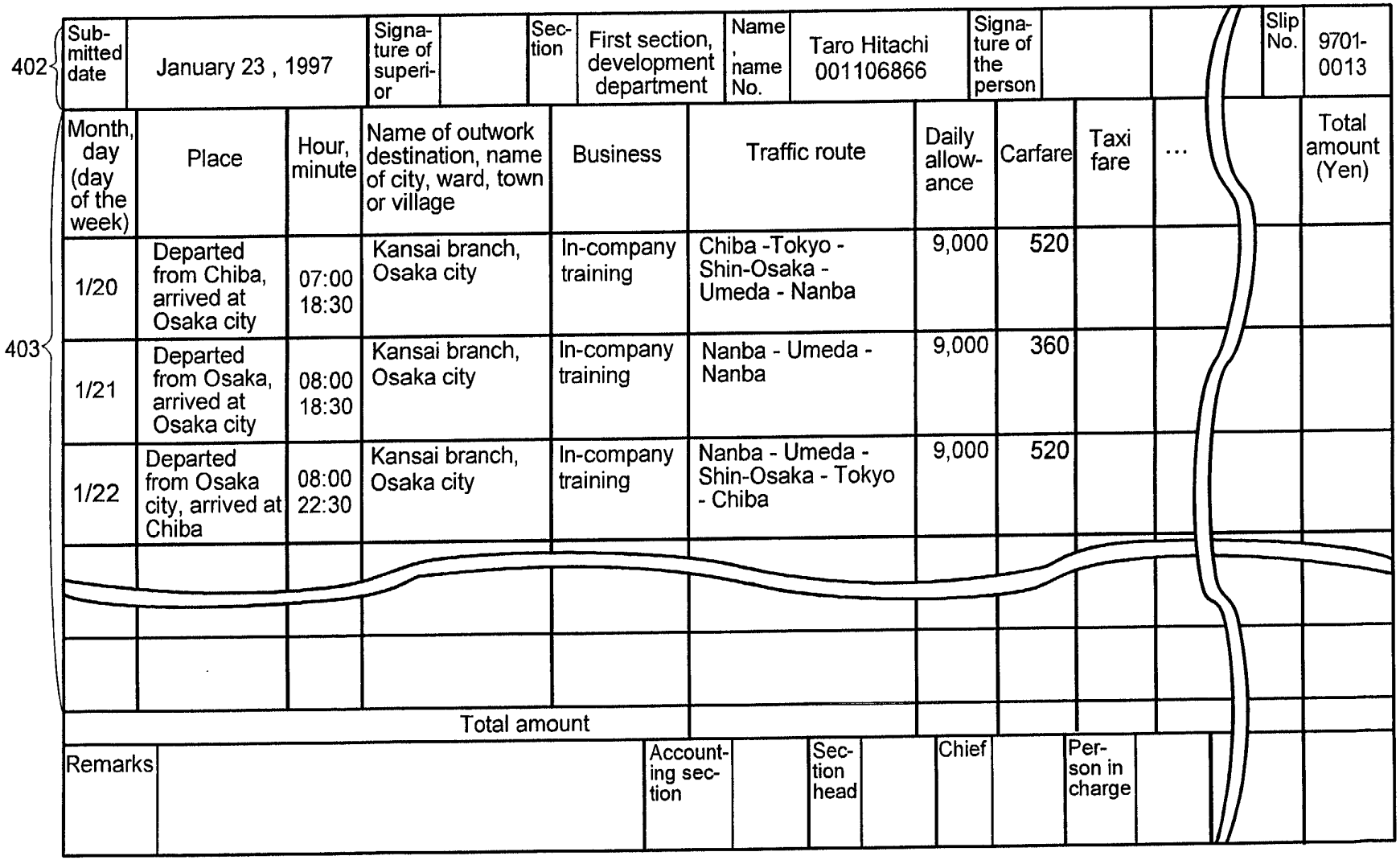
Month, day (day of the week)	Place	Hour, minute	Name of outwork destination, name of city, ward, town or village	Business	Traffic route	Daily allow-ance	Carfare	Taxi fare	...	Total amount (Yen)
1/14	Departed from Gyotoku, arrived at Toyocho	07:00 14:00	Systems laboratory, Yokohama City	Arrangement	Gyotoku - Kudanshita - Azamino - Kudanshita - Toyocho	1, 100				
1/16	Departed from Gyotoku, arrived at Toyocho	07:00 16:30	F bank, Chuo Ward	Client explanation meeting	Gyotoku - Ginza - Tokyo - Otemachi - Toyocho					
Total amount										

Remarks		Account-ing sec-tion		Sec-tion head		Chief		Per-son in charge		

09/508870

FIG.4

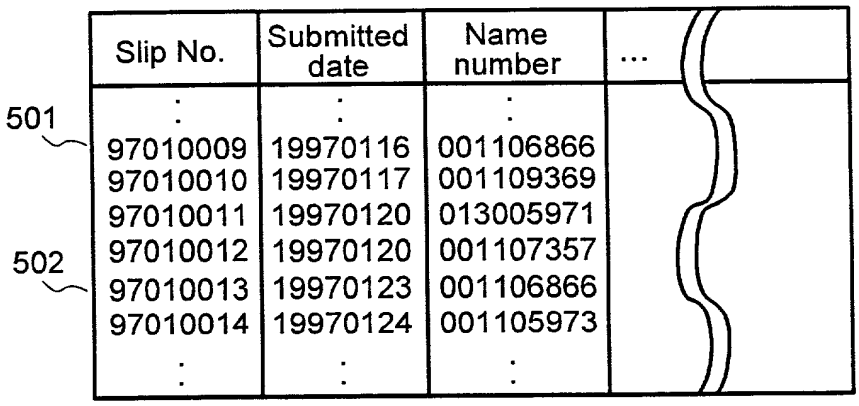
(b)



402	Sub-mitted date	January 23 , 1997		Signa-ture of superi-or		Sec-tion	First section, development department	Name , name No.	Taro Hitachi 001106866	Signa-ture of the person		Slip No.	9701-0013
403	Month, day (day of the week)	Place	Hour, minute	Name of outwork destination, name of city, ward, town or village	Business	Traffic route		Daily allow-ance	Carfare	Taxi fare	...		Total amount (Yen)
	1/20	Departed from Chiba, arrived at Osaka city	07:00 18:30	Kansai branch, Osaka city	In-company training	Chiba -Tokyo - Shin-Osaka - Umeda - Nanba		9,000	520				
	1/21	Departed from Osaka, arrived at Osaka city	08:00 18:30	Kansai branch, Osaka city	In-company training	Nanba - Umeda - Nanba		9,000	360				
	1/22	Departed from Osaka city, arrived at Chiba	08:00 22:30	Kansai branch, Osaka city	In-company training	Nanba - Umeda - Shin-Osaka - Tokyo - Chiba		9,000	520				
	Total amount												
	Remarks			Account-ing sec-tion		Sec-tion head		Chief		Per-son in charge			

09/508870

FIG.5



DERWENT-2000-0545

FIG.6

(a)

Slip No.	97010013								
	Outwork date	Departure time	Arrival time	Place		Path	Daily allowance	Carfare	...
				Outwork destination	Name of city, ward, town or village				
601	19970114	09:00	13:30	System laboratory	Yokohama city	Gyotoku - Kudanshita...	1,100	960	
602	19970116	07:00	17:00	F bank	Chiyoda-ward	Gyotoku - Ginza -...		640	

(b)

Slip No.	97010013								
	Outwork date	Departure time	Arrival time	Place		Path	Daily allowance	Carfare	...
				Outwork destination	Name of city, ward, town or village				
603	19970120	07:00	18:30	Kansai branch	Osaka city	Chiba - Tokyo - Shin-Osaka...	9,000	520	
604	19970121	08:00	18:30	Kansai branch	Osaka city	Nanba - Umeda - Nanba	9,000	360	
605	19970122	08:00	22:00	Kansai branch	Osaka city	Nanba - Umeda - Nanba - Shin-Osaka...	9,000	520	

0078805860

FIG.7

Status / Classification	0 (Registered)	1 (Preselected)	2 (Approved)	3 (Not Approved)	4 (Pending)	5 (Cancelled)
0 (Captive building)	Other than outwork	Other than outwork	Other than outwork	Out of object	Other than outwork	Out of object
1 (Client)	Outwork	Obscure	Outwork	Out of object	Obscure	Out of object
2 (Different captive building)	Outwork	Obscure	Outwork	Out of object	Obscure	Out of object
3 (Non-captive building)	Outwork	Obscure	Outwork	Out of object	Obscure	Out of object
4 (Transfer)	Outwork	Obscure	Outwork	Out of object	Obscure	Out of object
5 (Other)	Other than outwork	Other than outwork	Other than outwork	Out of object	Other than outwork	Out of object

09/508870

FIG.8

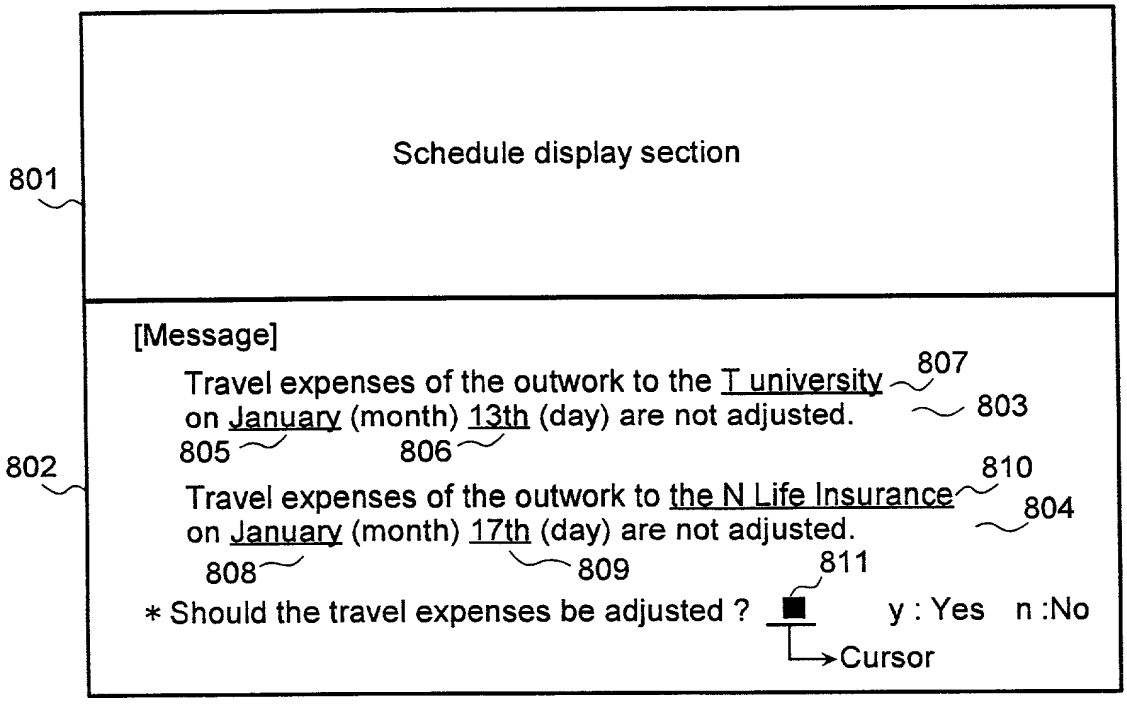

Schedule display section
801
[Message]
Travel expenses of the outwork to the T university
807
on January (month) 13th (day) are not adjusted.
803
805
806
802
Travel expenses of the outwork to the N Life Insurance
810
on January (month) 17th (day) are not adjusted.
804
808
809
811
* Should the travel expenses be adjusted ?
y : Yes
n :No
Cursor

FIG.9

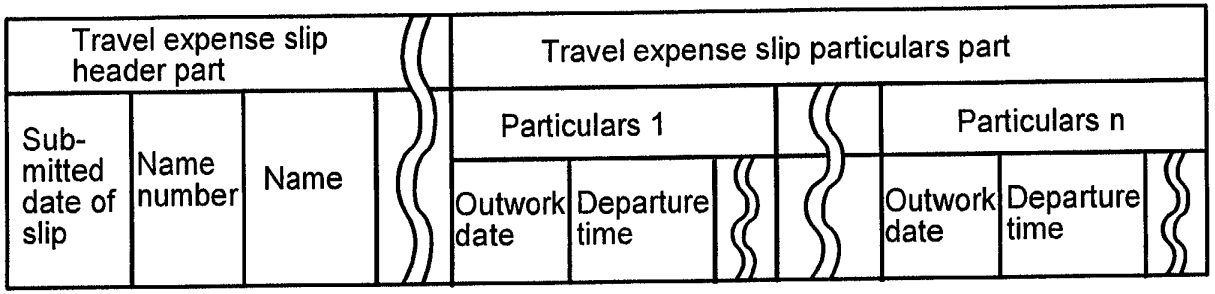
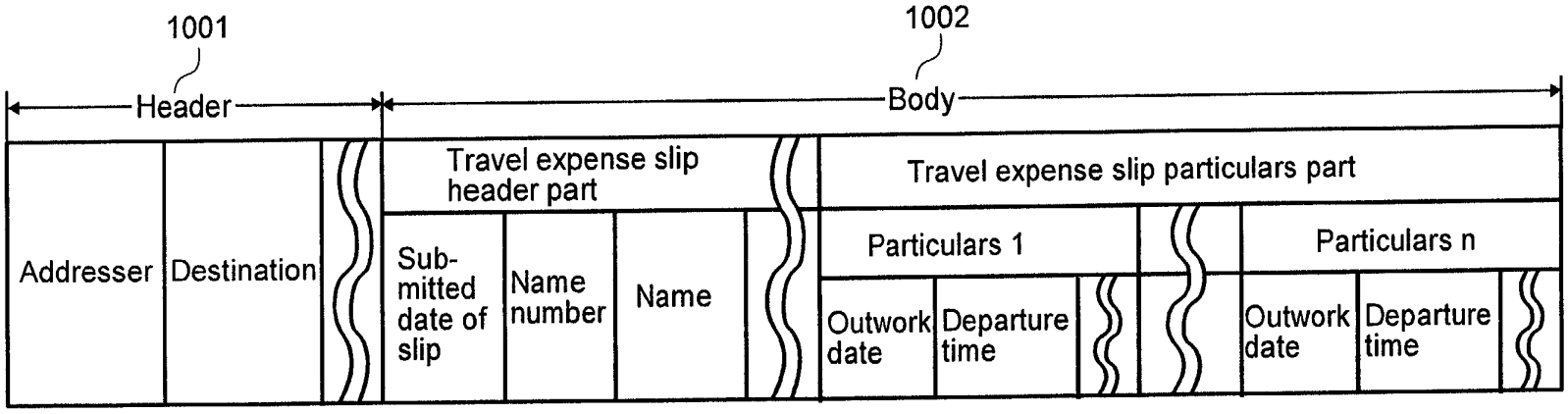


FIG.10



09/508870

PTO/SB/106(8-96)
Approved for use through 9/30/98. OMB 0651-0032
Patent and Trademark Office; U.S. DEPARTMETNT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

SCHEDULE MANAGEMENT SYSTEM AND METHOD

上記発明の明細書（下記の欄で×印がついていない場合は、本書に添付）は、

The specification of which is attached hereto unless the following box is checked:

☐ __月__日に提出され、米国出願番号または特許協定条約国際出願番号を_____とし、
(該当する場合) _____に訂正されました。

☒ was filed on 17/09/97
as United States Application Number or
PCT International Application Number
PCT/JP97/03281 and was amended on
_____ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第３７編第１条５６項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

PTO/SB/106(8-96)
Approved for use through 9/30/98. OMB 0651-0032
Patent and Trademark Office; U.S. DEPARTMETNT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Japanese Language Declaration
(日本語宣言書)

私は、米国法典第３５編１１９条 (a) - (d) 項又は３６５条 (b) 項に基き下記の、米国以外の国の少なくとも一カ国を指定している特許協力条約３６５ (a) 項に基ずく国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示している。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)
外国での先行出願

Priority Not Claimed
優先権主張なし

(Number) (番号)	(Country) (国名)	(Day/Month/Year Filed) (出願年月日)	☐
	Japan		
			☐

私は、第３５編米国法典１１９条 (e) 項に基いて下記の米国特許出願規定に記載された権利をここに主張いたします。

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)	(Application No.) (出願番号)	(Filing Date) (出願日)

私は、下記の米国法典第３５編１２０条に基いて下記の米国特許出願に記載された権利、又は米国を指定している特許協力条約３６５条 (c) に基ずく権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第３５編１１２条第１項又は特許協力条約で規定された方法で先行する米国特許出願に開示されていない限り、その先行米国出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則法典第３７編１条５６項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of application.

(Application No.) (出願番号)	(Filing Date) (出願日)	(Status: Patented, Pending, Abandoned) (現況：特許許可済、係属中、放棄済)

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委任状： 私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。（弁護士、または代理人の氏名及び登録番号を明記のこと）

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number)

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